

## REMARKS

Reconsideration and allowance are respectfully requested. Upon entry of this amendment, claims 1-70 will be pending.

The objection to claim 32 has been corrected.

Claims 1, 11, 24, 26, 30, 41, 51, and 64 stand rejected under 25 USC 112, second paragraph, as being indefinite.

Applicant has amended the claims, other than claim 26, to overcome the Examiner's rejections. Applicant notes, however, that these amendments are not narrowing in a manner that creates an estoppel pursuant to the recent *Festo* decision. In particular, the change in wording from "capable of" to "adapted to" in claims 1 and 30 is a semantic distinction to actively recite an action that had already been claimed. And the change in dependencies with respect to claims 11 and 51 correct for antecedent basis, but are not limiting to the claims. Further, the change from "care plan" to "service plan" corrects an antecedent basis, and is also broadening, as a service plan is broader than a care plan.

With respect to claim 26, the claim as drafted is directed to "updating a predetermined plurality of existing service plans." Accordingly, the recitation of "revised service plan" in claim 26 is appropriate, as this is intended. The further type of revision to such an existing service plan introduced in claim 29 is also appropriate. Withdrawal of this rejection is respectfully requested.

Claims 1-7, 11-12, 15-16, 21-39, 41-47, 51-52, 55-56 and 61-65 are rejected under 35 USC 102(b) as being anticipated by Macrea et al '237. Applicant respectfully traverses the Examiner's grounds of rejection.

Central to the inventions described by applicant is the distinct nature of a structured sentence from workflow. In each of independent method claims 1, 26, and 30, the structured sentence is recited as being distinct from the electronic workflow. Claim 1 recites the step of creating a plurality of structured sentences, followed by the distinct step thereafter of creating an electronic workflow. In claim 26, there exists one step of adding new structured sentences, followed by the distinct step thereafter of adding workflow instances corresponding to the new structured sentences. In claim 30, the step of selecting structured sentence data items also causes the selection of the distinct workflow instances. Claim 40 recites a plurality of structured

sentence data items and associated workflow process specifications. Further independent apparatus claim 41 recites two separate structures, means for creating a plurality of structured sentences, and means for creating an electronic workflow.

While there is an association between structured sentences and workflow instances, such as the one-to-one correspondence that will exist between each structured sentence and workflow instance as recited in claim 2, the two are distinct. The usage of structured sentences distinct from the workflow has distinct advantages, as the user who creates a service plan need not understand the workflow principles --and in particular workflow process diagrams -- but can instead create a service plan based upon only the structured sentences. This distinction is not one that is merely semantic, as there are numerous distinctions that arise from this differentiation, both with respect to the features set forth in the independent claims, as well as certain dependent claims, as discussed hereinafter.

A typical clinician user is historically familiar with creating a textual visit note in the form of a textual plan of care. Such a clinical user is not familiar, however, with workflow principles and workflow process diagrams.

Any user of the '237 patent system, however, must be familiar with workflow process diagrams and related icons, as that is the only way to use the '237 patent system. In particular, in rejecting claims 1, 30 and 41 the Examiner refers to the "library of hierarchical folders," which are part of the workflow process diagram according to the '237 patent that is being created.

In this regard, certain terminology differences between the present inventions and the '237 patent are significant. In the present invention, the term "template," as used in claim 26 is associated with a group of structured sentences. In contrast, in the '237 patent the "template" is constructed from a group of "nodes" that actually implement the workflow. For example, as taught at column 7, lines 20-27, there are five different types of nodes (Start, Order, Results, Flow Control and Exit) that are positioned in a chronological order (see column 7, lines 53-55) to create a template. These nodes are thus the separate pieces, each represented as an icon, that are used to build the workflow process diagram.

And to create any given node, different types of actions are required, which further illustrate that the '237 patent does not anticipate the presently claimed inventions.

For instance, the hierarchical folders referred to by the Examiner can be used to find orderable services that can be selected and incorporated into an order list in the form of "work

items" in an Order Node. Associated with a given work order is attribute data (for instance, the cost of the strep test procedure). This work order, however, is only a small component of the overall workflow, and in order for the workflow to be implemented (i.e. for the template to know what to do with the work order once the results have come back) the Results Node must be selected in order to tell the system what to do, and in many instances the Flow Control Node will also need to be selected --and these different nodes, as explained above, will then need to be graphically positioned with respect to each other in order to create a single "template." And even if templates exist, for a given user to update an existing template, the workflow principles and workflow process diagrams described by the '237 patent need to be understood.

As is apparent, because all activities must take place within the structure of the workflow system described by the '237 patent, it is not easy to use. It is for that reason, among others, that Applicant believes the system of the '237 patent has not gained any widespread acceptance in the field. In contrast, because of the distinction between structured sentences and workflow in the present invention, only the structured sentences need be understood by the user, and these can be created in a manner that is intuitive to the manner in which typical users presently operate.

Accordingly, it is respectfully submitted that independent claims 1, 26, 30 and 41, and the claims dependent thereon, contain patentably distinct subject matter.

Further advantages are also achieved by the present invention, based upon further aspects which stem from the distinctness of the structured sentence from the workflow.

Independent claim 26 recites a method of selecting a plurality of customers that have in common the need for a plurality of services and update each of their existing distinct service plans automatically by adding a selected plurality of new structured sentences intended to meet the common needs, and adding workflow instances corresponding to the new structured sentences. While a particular template of the '237 patent could be updated and reused when updating a treatment plan for various patients according to the '237 patent, there is no provision for this being performed on a population of patients.

Independent claim 30 adds the concepts of "templates" according to one aspect of the present invention. In this aspect, each template is a collection of structured sentences. In the method, more than one template exists, at least one is selected, and within that template only those structured sentences that are required are selected. These templates can be associated with customer needs, corresponding to the same customer needs used to organize the structured

sentences within a service plan. This is an important innovation in that as the user is constructing the portion of the service plan related to a given customer need, the system can offer to the user the templates that include services most relevant to that need. In contrast, the work orders described in the '237 patent are not organized according to the patient need. Rather, they are organized according to the category of services and the department which provides the service. This is also the approach used for traditional clinical order entry systems. Since customer needs frequently dictate services that cut across departments, this organizational approach often forces the user to traverse the hierarchy multiple times to specify the services for a single customer need.

Dependent claims 6 and 46 add a further step and structure, respectively, that modify at least one of the structured sentence attributes, which modification causes a sequence of tasks involved within at least one of the workflow process instances. As the attributes of the work orders of the '237 patent are merely data (such as the cost of the strep test procedure noted above), there is no teaching or suggestion in the '237 patent that modification of an attribute can cause a the sequence of tasks invoked within the workflow instance to change. Further, since the '237 patent teaches the usage of the separate Flow Control and Result Nodes, one of ordinary skill in the art would not have been motivated to modify the '237 patent system, and in particular the Order Node, to accommodate this feature. Accordingly, claims 6 and 46 contain allowable subject matter.

Claims 16 and 56 further recite an interdisciplinary team that is used to create the plurality of structured sentences. While the '237 patent describes multiple individuals providing care and entering results, there is no teaching or suggestion of an interdisciplinary team being used to create the care plan that contains the plurality of structured sentences. Nor is there any teaching or suggestion of using a workflow automation process to distribute a draft of the structured sentences to the interdisciplinary team as recited in new claims 69 and 70.

Claims 21 and 61 further illustrate another further flexibility that the present invention has. In claims 21 and 61, other structured sentences that do not relate to services are added, which increase the flexibility of the system. The '237 patent does not disclose or suggest structured sentences for any of a goal, fact, protocol or finding at column 8, lines 23-29 referenced by the Examiner.

Claims 24 and 664 recite providing a service plan in one form to a user and in another form to a customer. This feature is not disclosed or suggested by the '237 patent.

Claims 8-10, 13-14, 17-20, 41, 48-50, 53-54, and 57-60 stand rejected under 35 USC 103 as being unpatentable over the '237 patent in view of the Brown '095 patent. Applicant respectfully traverses the Examiner's grounds of rejection.

It is believed that "claim 41" at paragraph 45 is believed to be a reference to "claim 40" and thus the rejection above is treated as a rejection of claim 40 rather than claim 41.

Initially, Applicant respectfully submits that the combination of the '237 patent and the '095 patent would not have been attempted by one of ordinary skill in the art. The '237 patent requires a specific type of workflow process in order to operate, and makes no provision for inclusion of information from sources such as a Palm device as described in the '095 patent. The types of portable devices described in the '095 patent would not be suitable for the complex manipulations of graphical icons in workflow diagrams required in the '237 patent, which would require a larger graphical display screen. Also, these same workflow diagram interactions described in the '237 patent would not be sufficiently intuitive to be used directly by patients, which are the intended end users of the system envisioned in the '095 patent.

Further, *assuming arguendo* that the combination is appropriate, the claims contain allowable subject matter.

With respect to independent claim 40, the arguments presented above with respect to the other independent claims apply equally as well here. Additionally, there is no concept of obtaining dismissed alerts, grouping related inappropriate alerts, and then determining a revised workflow and revised structured sentences thereon in either the '237 or '095 patents. In particular, the cited passage relating to the '095 patent are all in the context of messages for a single patient. Thus, no concept of grouping alerts associated with existing service plans (plural) is disclosed or suggested.

And with respect to the rejected dependent claims, initially it is noted that they are all patentable due to their being dependent upon an allowable independent claim. Further, they also contain patentably distinct subject matter.

With respect to claims 8-10, 13, 48-50 and 53, while the '095 patent refers to a feedback element to query the patent to provide information, it does not disclose question-based entry using the definition of "question" taught on page 17, lines 19-27 and page 18, lines 1-11, where

the question is a reusable data item with meta data to facilitate its reuse. More importantly, this feature is not disclosed in the '095 patent in the context of a system which also uses structured-sentence entry of care plans. An important feature of the present invention not envisioned in either the '095 or '237 patents is that even in a system utilizing structured-sentence-based entry of care plans by clinicians trained to use the system, it is useful to augment such entry using question-based entry for non-trained users such as patients (customers).

Claims 14 and 54 relate to basing decision steps during workflow execution on query logic that includes multiple data items. Claim 14 and 54 of the present invention discloses the extension of the use of structured sentence data items and question data items to also include "query data items". As taught on page 18, lines 12-21 and FIG 4, the concept of query data items provide "a layer of abstraction" between these two types of data items used for data capture, and the "higher-order meta data" such as care plan templates and workflow process specifications. The objective is to create re-usable query data items that are incorporated into care plan templates and workflow specifications, and then have these query data items call upon the data acquired by a one or more structured sentence data items and question data items. This allows new versions of structured sentence data items and question data items to be incorporated into the system without having to change all the care plan templates and workflow process specifications. There is no teaching or suggestion in the '237 patent or the '095 patent of any such concept of query data items used to provide a layer of abstraction between structured sentence data items and question data items on the one hand, and care plan templates and workflow specifications on the other hand.

Claims 18-20 and 58-60 relate to obtaining a customer readable version of a service plan. In the '237 patent, figures 14 and 15 and column 10, lines 37-51 disclose reformatting the content of workflow instances, which are described as "care plans". However, this is different from the present invention in that (1) the present invention involves translation to different words intended to be understood by non-experts, based on meta data provided to enable such translation (rather than just reformatting the same content), and (2) the present invention involves providing this translation to the customer (patient), with the goal of making it understandable to the customer, rather than just to provide a more convenient view to the user (clinician).

The '095 patent does disclose a method for transmitting "treatment regimen and protocols" to devices used by patients. This data is readable by the device, which displays

reminders and questions to the patient. But this '095 patent does not disclose any method for generating a patient-readable version of this treatment regimen and protocol data in the form of a service plan.

In view of the above amendments and remarks, Applicants submit that the above-referenced application is in a condition for allowance, and such a notice is respectfully requested.

**CHARGE STATEMENT:** The Commissioner is hereby authorized to charge any missing or insufficient fee which may be required relative to this application, or credit any overpayment, to our Account 03-3975/Order No. 073618/0259567 (RHS-001-U) above, for which purpose a duplicate copy of this sheet is enclosed. This CHARGE STATEMENT does not authorize charge of the issue fee until/unless an issue fee transmittal form is filed.

Respectfully submitted,



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## APPENDIX WITH MARKINGS SHOWING CHANGES MADE

### IN THE CLAIMS

1. (Amended) A method for automatically generating a service plan and associated workflow for a customer using a computer based network comprising the steps of:

creating a plurality of structured sentences for each of a plurality of identified customer needs in an electronic storage area, said plurality of structured sentences including structured sentences for services, each structured sentence for service identifying a needed service corresponding to one of the identified customer needs; and

creating an electronic workflow [capable of assisting] adapted to assist completion of each needed service.

2. (Amended) A method according to claim 1 wherein said step of creating [an] the electronic workflow creates a workflow process instance for each needed service, such that there exists a workflow process instance associated with each structured sentence for service.

11. (Amended) A method according to claim [3] 12 wherein certain ones of said workflow process instances have at least one decision step, task firing condition or routing rule that creates a plurality of possible routes contained therein, and further including the step of creating or modifying at least one of the workflow relevant data items, which modification also causes a change to the sequence of tasks invoked within at least one of the workflow process instances.

14. (Amended) A method according to claim 5 wherein the step of executing [a] the workflow process instance further includes the step of [performing a query] creating query data items that create[s] or modify[ies] workflow relevant data using query metadata that maps [the] response options in a question or structured sentence data item to [the] other response options in at least one other question or structured sentence data item, thereby creating a single data value used in a decision step, task firing condition or routing rule as part of the execution of said workflow process instance.

16. (Amended) A method according to claim 15, wherein the step of creating [a] the plurality of structured sentences is created by an interdisciplinary team of clinicians.



23. (Amended) A method according to claim 22 further including updating status information for the service plan as workflow progresses.

24. (Amended) A method according to claim 23 wherein updates are provided to a user of the [care] service plan in one form and updates are provided to the customer in another form.

26. (Amended) A method of automatically updating a predetermined plurality of existing service plans corresponding to a respective plurality of customers, each of said service plans including a plurality of structured sentences for each of a plurality of identified customer needs stored in an electronic storage area, said plurality of structured sentences including structured sentences for services, each structured sentence for service identifying a needed service corresponding to one of the identified customer needs and an electronic work flow capable of assisting completion of each needed service, the method comprising the steps of:

- generating a report based upon data contained within each of the predetermined plurality of existing service plans or from data obtained from performing workflow associated with each of the predetermined plurality of existing service plans;

- selecting a plurality of customers in need of one or more services

- adding new structured sentences that are common to the predetermined plurality of existing [care] service plans for the selected plurality of customers; and

- adding workflow instances corresponding to the new structured sentences; and

- causing initiation of the revised workflow instances for each revised service plan.

30. (Amended) A method for creating a service plan and associated workflow for a customer using a computer based network comprising the steps of:

- providing electronically:

- a plurality of structured sentence data items for each of a plurality of possible customer needs in an electronic storage area, said plurality of structured sentence data items including structured sentence data items for services, each structured sentence data item for service identifying a needed service corresponding to one of the possible customer needs;

- an electronic work flow capable of assisting completion of each needed service; and

at least first and second templates, each of said at least first and second templates comprising a different set of certain ones of said plurality of structured sentence data items that each relate to different possible customer needs;  
selecting at least a first template that relates to an identified customer need; and  
selecting those structured sentence data items within the first template that relate to the specific need of a particular customer, the step of selecting those structured sentence data items also causing the selection of workflow instances [capable of assisting] adapted to assist completion of each needed service.

32. (Amended) A method according to claim 31 wherein the attribute values for certain ones of said plurality of attributes is selectable from a collection of mutually exclusive choices.

42. (Amended) An apparatus according to claim 41 wherein said means for creating [an] the electronic workflow creates a workflow process instance for each needed service, such that there exists a workflow process instance associated with each structured sentence for service.

51. (Amended) An apparatus according to claim [43] 52 wherein certain ones of said workflow process instances have at least one decision step, task firing condition or routing rule that creates a plurality of possible routes contained therein, and further including the step of creating or modifying at least one of the workflow relevant data items, which modification also causes a change to the sequence of tasks invoked within at least one of the workflow process instances.

54. (Amended) An apparatus according to claim 45 wherein the means for executing [a] the workflow process instance further includes means for [performing a query] creating query data items that create[s] or modif[ies]y workflow relevant data using query metadata that maps [the] response options in a question or structured sentence data item to [the] other response options in at least one other question or structured sentence data item, thereby creating a single data value used in a decision step, task firing condition or routing rule as part of the execution of said workflow process instance .

63. (Amended) An apparatus according to claim 62 further including means for updating status information for the service plan as workflow progresses.

64. (Amended) A method according to claim 63 wherein updates are provided to a user of the [care] service plan in one form and updates are provided to the customer in another form.